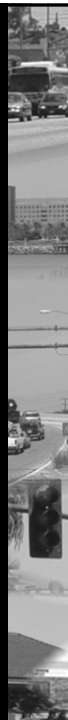


Atlantic Boulevard / I-710 Corridor Advanced Traffic Management System Improvement Project

**GATEWAY CITIES PUBLIC WORKS OFFICERS TRAFFIC
SIGNAL SYNCHRONIZATION SUBCOMMITTEE**
July 15, 2004

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Atlantic Boulevard / I-710 Corridor ATMS Project



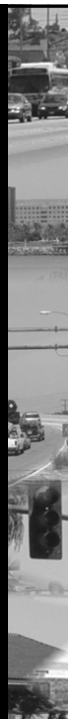
Agenda

- Project Background
- Project Area
- Project Objectives
- Project Components
- Future Operations
- Early Deployment
- Schedule

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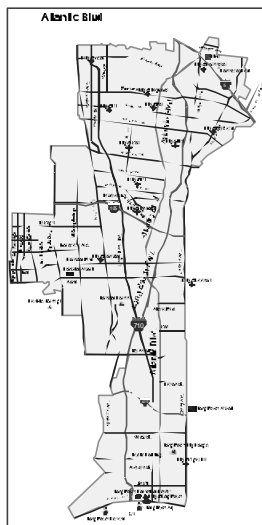
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Project Area



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Atlantic Boulevard / I-710 Corridor ATMS Project




Project Objectives

- Provide full access to an ATMS to all agencies in the corridor for monitoring and control of their signals
- Ability to synchronize signals across jurisdictional boundaries
- Allow for exchange of real-time traffic information

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Atlantic Boulevard / I-710 Corridor ATMS Project



Project Elements

- ATMS(s) for local signal control and monitoring
 - Traffic Control Systems
 - System Detection
 - Closed Circuit Television Cameras
- Establishment of Local Control Centers at each jurisdiction
- Integration with IEN
- Communications (for both data and video)
 - Field to Center (intersections to LCC)
 - Center to Center (LCC to County TMC)

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- Integration with on-going Gateway Cities Projects
- Communications
- Impact on Partner Agencies
- Schedule
- Early Deployment


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- Local monitoring and control of intersections
- Upload download of timing plan parameters
- Status of controllers, detection and communications systems
- Alarms for equipment malfunction

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Information Exchange System (IEN)

- Regional monitoring of intersections and traffic data
- Regional operations – download of pre-approved timing plans during special conditions

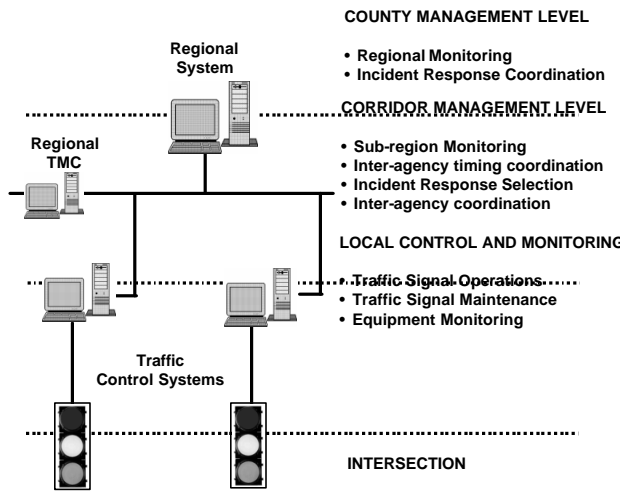
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County Architecture Functions

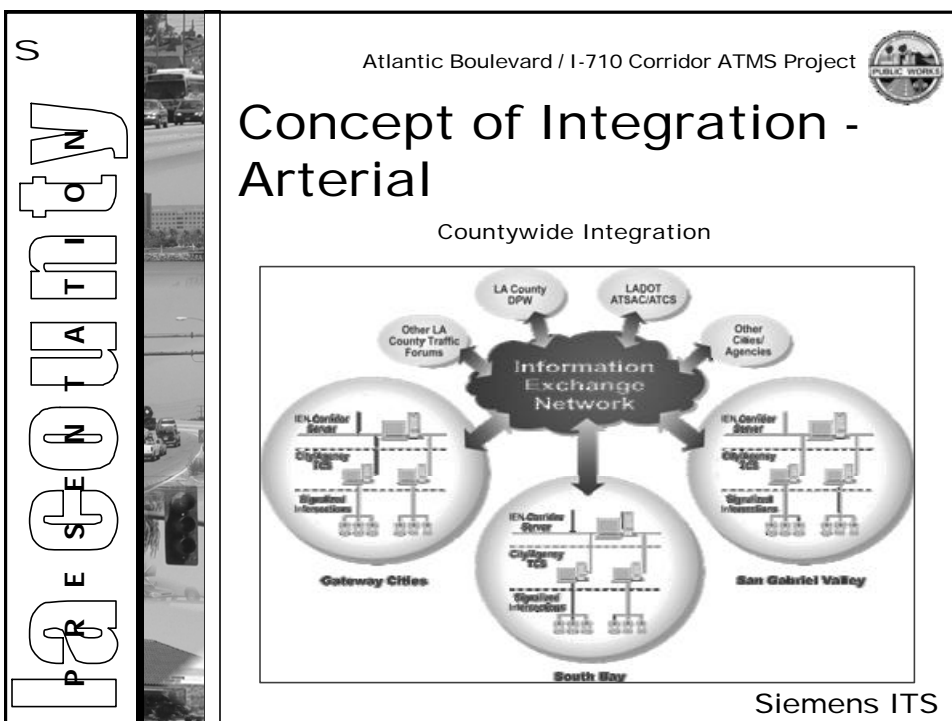
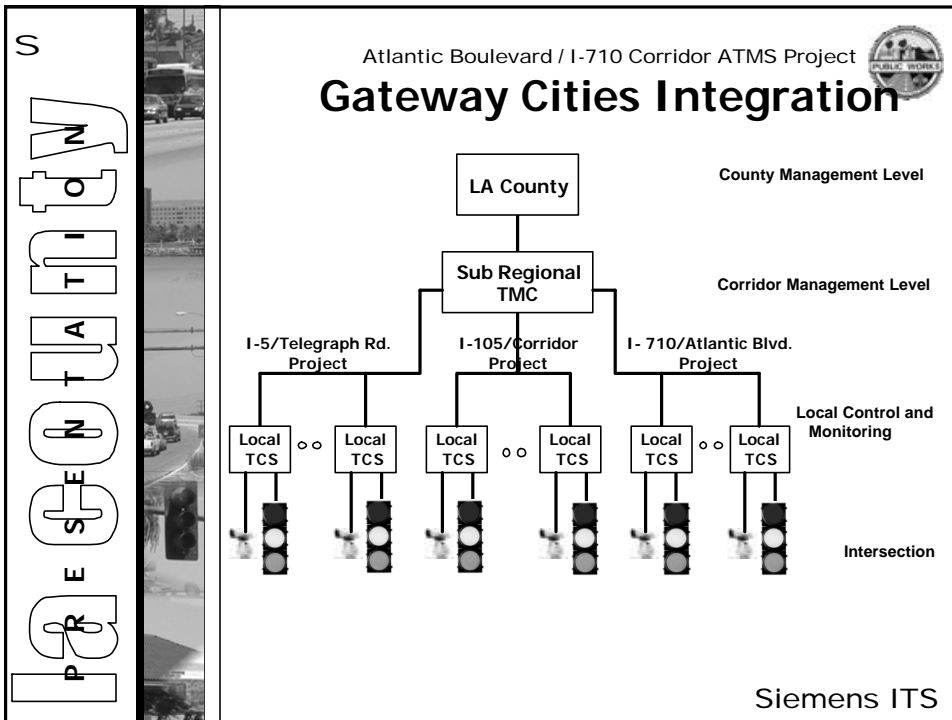


The diagram illustrates a hierarchical system architecture with four levels:

- COUNTY MANAGEMENT LEVEL**
 - Regional Monitoring
 - Incident Response Coordination
- CORRIDOR MANAGEMENT LEVEL**
 - Sub-region Monitoring
 - Inter-agency timing coordination
 - Incident Response Selection
 - Inter-agency coordination
- LOCAL CONTROL AND MONITORING**
 - Traffic Signal Operations.....
 - Traffic Signal Maintenance
 - Equipment Monitoring
- INTERSECTION**

Key components shown in the diagram include: Regional System, Regional TMC, Traffic Control Systems, and Intersections.

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Atlantic Boulevard / I-710 Corridor ATMS Project

Summary of Forum Affiliation and TCS Information for Agencies in the Project Area

Atlantic Blvd. / I-710 Corridor Agency	Part of I-105 Corridor Project	Part of I-5 / Telegraph Road Corridor Project	Existing TCS	Type of Controllers	Signals Maintained By County
Bell				Type 170	County
Bell Gardens				NEMA	County
Commerce		X	To be upgraded to QuicNet IV	Type 170	Contractor
Compton	X			NEMA	City
Cudahy				Type 170	PEEK
Huntington Park				Traconex, Type 170	City
Long Beach			QuicNet IV	Type 170	City
Lynwood	X			Type 170	City
Maywood				Type 170	PEEK
Paramount	X			Type 170	Santa Fe Springs
Signal Hill				Type 170	Long Beach
South Gate	X		i2TMS	NEMA	City
Vernon			ARIES	NEMA	PEEK

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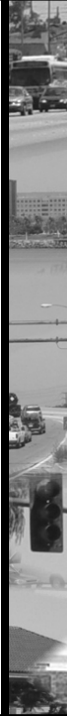
Intersection Upgrade Options (examples)

- Controllers
 - NEMA
 - 170
- Detection
 - Loop
 - Video
 - Radar

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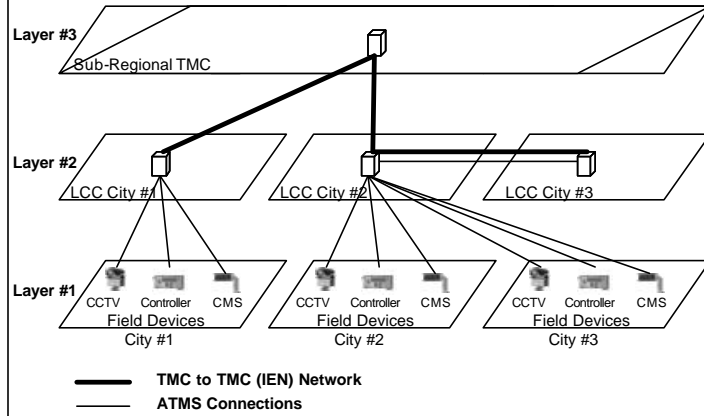
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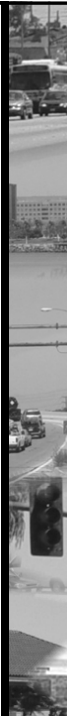
Communications



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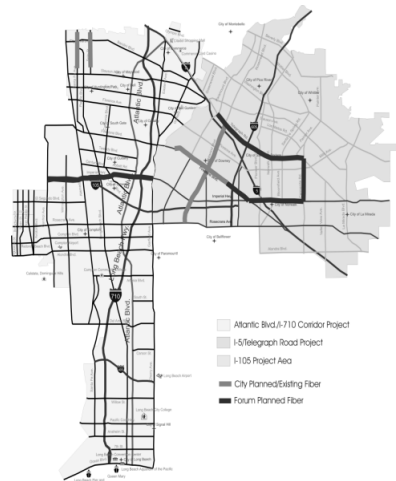
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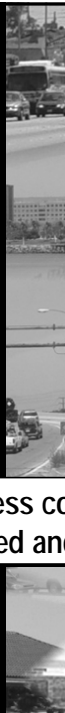



Communications



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Communications: Approach

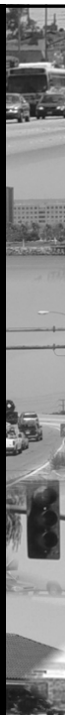
- Identify high bandwidth links to define the backbone
- Identify tail circuits
- Apply technology options
- Fit to planned forum infrastructure
- Fit to budget


•Wireless communications are well received and sometimes preferred.

•Leased communications are an increasing option.

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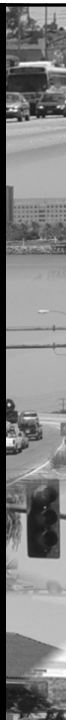
Communications Options

- Cable Based Media
 - Copper to replace leased lines
 - Copper replacement
 - Fiber Optic
- Wireless
 - Spread Spectrum
 - Microwave
 - Leased services

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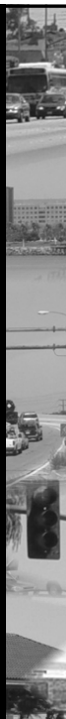
Future Operations

- System Operations
 - Signal Timing
 - Inter-agency Coordination
 - Special Event Management
 - Incident Response
- System Management
 - Equipment Monitoring
 - Back-ups
 - Upgrades

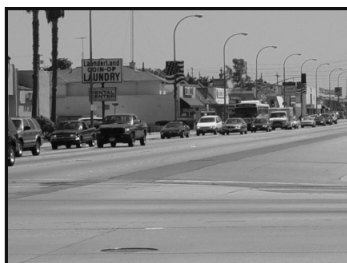
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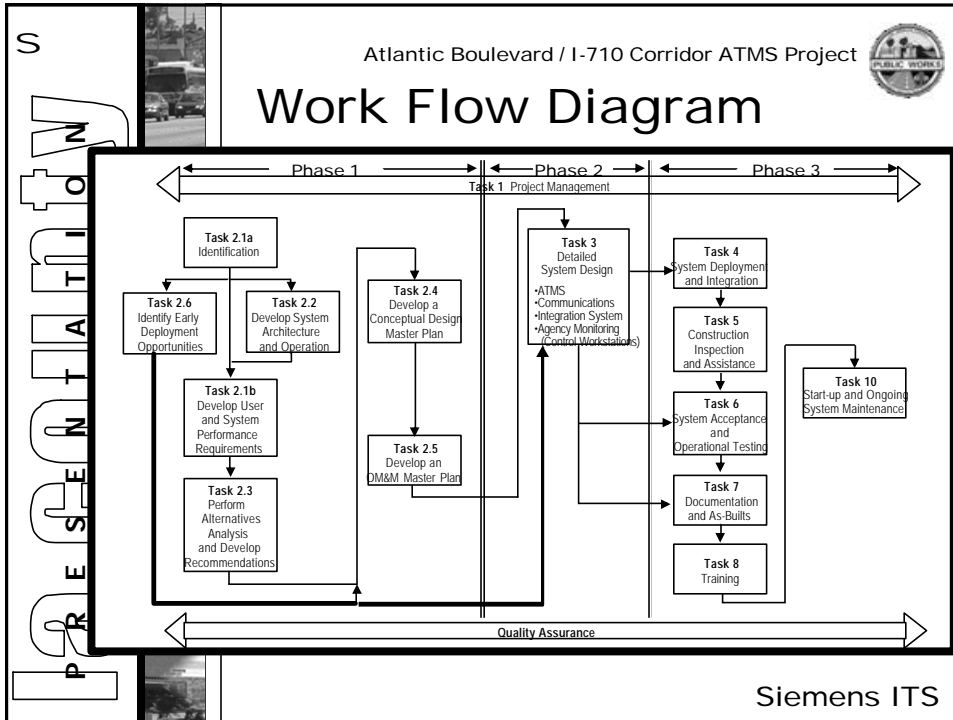


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Early Deployment Strategy

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Early Deployment Priority Selection Possibilities

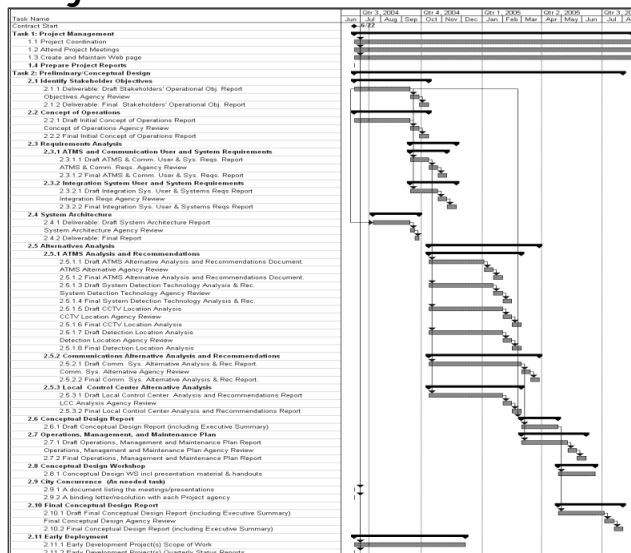
- Cities with existing ATMS
- Controller replacement
 - Not necessary
 - TSSP scope
- Communications
 - Existing communications
 - Wireless ability
 - Rapid bus deployment
- City support

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Project Schedule



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